

A review of the genus *Narosa* Walker in China (Lepidoptera: Limacodidae)

WU Chun-Sheng*, FANG Cheng-Lai

(Key Laboratory of Zoological Systematics and Evolution, Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, China)

Abstract: Nine species and one subspecies of the genus *Narosa* Walker are recognized from China, including a new species, *N. pseudopropolia*, described herein. *N. propolia* Hampson is reported for the first time in China. The adult and genitalia photographs of the examined species are given. A key to the Chinese species of the genus is provided.

Key words: Lepidoptera; Limacodidae; *Narosa*; new species; China

The genus *Narosa* was erected by Walker in 1855, based on the type species, *N. conspersa* Walker. At present, it contains about 40 species and distributes mainly in the Oriental Region (Hering, 1931, 1933; Inoue, 1976, 1982, 1992; Holloway, 1986, 1990; Holloway *et al.*, 1987, Yoshimoto, 1994, 1998). In China, seven species were recorded previously (Hering, 1931, 1933; Cai, 1981, 1982; Inoue, 1992). In this paper, nine species and one subspecies are reported from China, of which one species is newly recorded in China and one species is described as new to science.

The type specimens of the new species are deposited in the Institute of Zoology, Chinese Academy of Sciences (IZCAS), Beijing, China.

Genus *Narosa* Walker, 1855

Narosa Walker, 1855. *List Specimens lepid. Insects Colln Br. Mus.*, 5: 1 103, 1 151.

Type species: *Narosa conspersa* Walker, 1855.

Penicillanarosa Strand, 1917, *Arch. Naturgesch.*, 82 (A) 3: 141.

Type species: *Narosa penicillata* Strand, 1917.

♂ Antenna filiform. Labial palpus ascending to vertex. Hind tibia with 2 pairs of spurs. Forewing with a deep costal area; pale or dark orange fasciae present; R_1 sinuous; R_5 and $R_3 + R_4$ stalked; M_2 and M_3 stalked shortly. Hindwing with M_1 and R_s from same point or stalked; $Sc + R_1$ from base of cell.

In male genitalia sacculus usually having some sort of process. In female genitalia ductus bursae

distally spiraled, and corpus bursae with a lenticular array of numerous stellate signa extending over almost the whole length.

Distribution: China, Korea, Japan, Sri Lanka, India, Nepal, Thailand, Myanmar, Philippines, Indonesia, Malaysia, New Guinea.

Key to Chinese species of the genus *Narosa*

1. Hindwing with M_1 and R_s separate *N. nitobei*
Hindwing with M_1 and R_s connate or stalked 2
2. Wings yellow 3
Wings white to yellowish brown 7
3. Forewing with a white apical spot 4
Forewing without a white apical spot 5
4. Forewing with streaks at base *N. pseudopropolia*
Forewing without streak at base *N. propolia*
5. Wing expanse 18–22 mm; forewing with a dark large spot beyond cell 6
Wing expanse 13–17 mm; forewing without dark spot beyond cell *N. ochracea*
6. Juxta with a pair of processes apically *N. corusca*
Juxta with 2 pairs of processes apically *N. fulgens*
7. Forewing white *N. nigrisigna*
Forewing yellowish brown 8
8. Forewing with a rusty dot at end of vein Cu_2 ; hindwing pale golden *N. pseudochracea*
Forewing without a rusty dot at end of vein Cu_2 ; hindwing white *N. edoensis*

1 *Narosa corusca corusca* Wileman, 1911 (Figs. 1a, 8, 14)

Narosa corusca Wileman, 1911, *Entomologist*, 44: 205.

Narosa baibarana Matsumura, 1927, *J. Coll. Agr. Hokkaido Imp. Univ.*, 19: 88.

Narosa ishidae Matsumura, 1927, *J. Coll. Agr. Hokkaido Imp. Univ.*, 19: 87.

Narosa shinshana Matsumura, 1927, *J. Coll. Agr.*

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* 通讯作者 Author for correspondence, E-mail: wucs@ioz.ac.cn

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Hokkaido Imp. Univ., 19: 89.

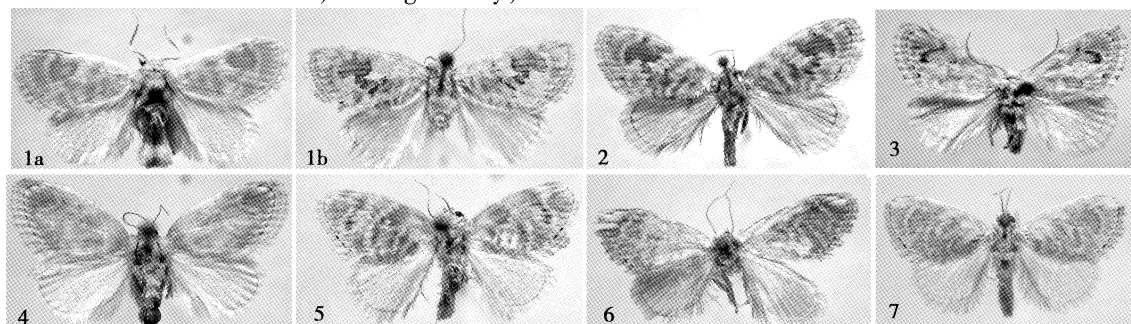
Narosa takamukui Matsumura, 1927, J. Coll. Agr.

Hokkaido Imp. Univ., 19: 88.

♂, 1982. VI. 24.

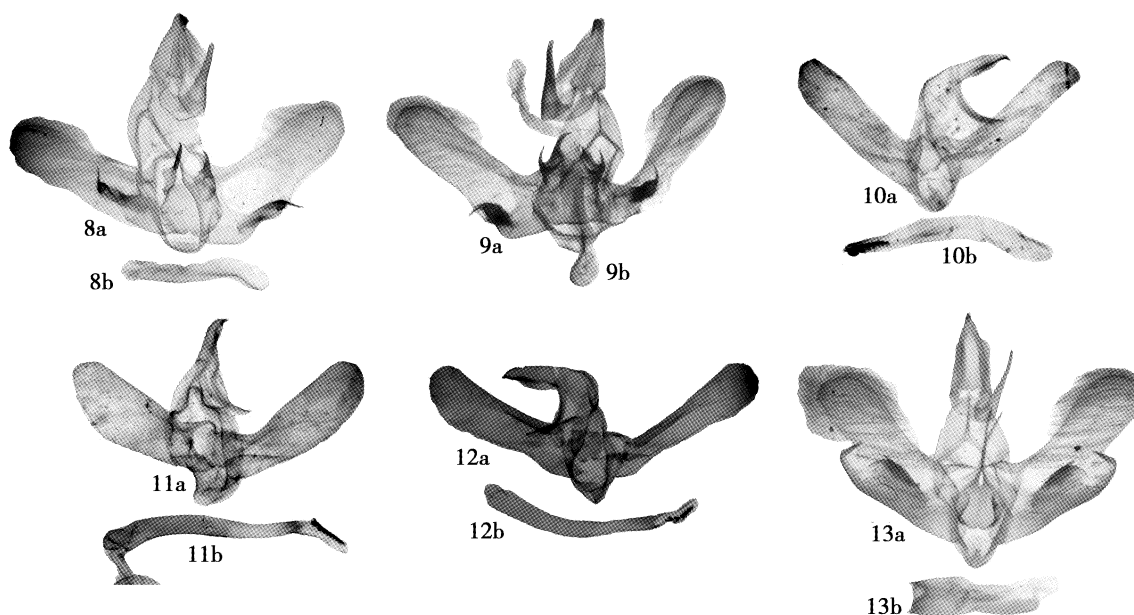
Distribution: Yunnan, Taiwan.

Specimens examined: Yunnan, Lufeng County, 1



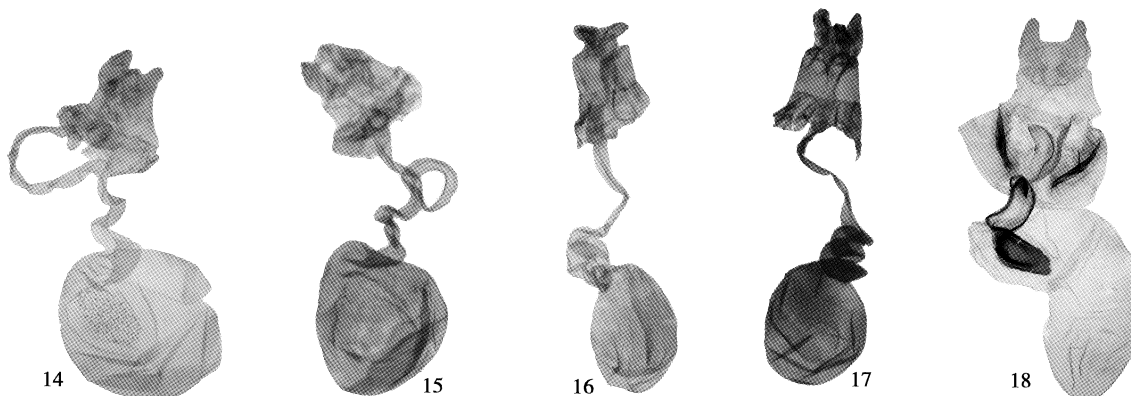
Figs. 1 – 7 Adults of *Narosa* spp.

1a: *N. corusca corusca* Wileman; 1b: *N. corusca amamiana* Kawazoe et Ogata; 2: *N. fulgens* (Leech); 3: *N. nigrisigna* Wileman; 4: *N. edoensis* Kawada; 5: *N. ochracea* Hering; 6: *N. propolia* Hampson; 7: *N. pseudopropolia* sp. nov.



Figs. 8 – 13 Male genitalia of *Narosa* spp. (a: Male genitalia except aedeagus; b: Aedeagus)

8: *N. corusca* Wileman; 9: *N. fulgens* (Leech); 10: *N. nigrisigna* Wileman; 11: *N. edoensis* Kawada; 12: *N. ochracea* Hering; 13: *N. pseudopropolia* sp. nov.



Figs. 14 – 18 Female genitalia of *Narosa* spp.

14: *N. corusca* Wileman; 15: *N. fulgens* (Leech); 16: *N. nigrisigna* Wileman; 17: *N. edoensis* Kawada; 18: *N. propolia* Hampson.

2 *Narosa corusca amamiana* Kawazoe et Ogata, 1962 (Fig. 1b)

Narosa amamiana Kawazoe et Ogata, 1962, *Tyo To Ga*, 8: 16.

Narosa corusca amamiana Kawazoe et Ogata: Inoue, 1976, *Bull. Fac. Domestic Sci., Otsuma Woman's Univ.*, 12: 157.

Food plants: *Camellia*, *Vernicia*.

Specimens examined: Jiangxi, Mt. Lushan, 15 ♂♂ 1 ♀, 1974. VI. 12 – 17, Zhang Baolin, 3 ♂♂, 1975. VI. 19 – 26, Fang Yuqing, Liu Youqiao; Nanchang, 1 ♂, 1978. VI. 2. Hunan, Mt. Hengshan, 2 ♂♂, 1974. V. 30 – VI. 1 ♂, 1979. IX. 4, Zhang Baolin. Shaanxi, Ningshan County, Huoditang, 5 ♂♂, 1979. VII. 30 – VIII. 7, Han Yinheng.

Distribution: Jiangxi, Hunan, Shaanxi; Japan.

3 *Narosa fulgens* (Leech, [1889]) (Figs. 2, 9, 15)

Heterogenea fulgens Leech, [1889] 1888, *Proc. Zool. Soc. Lond.*, 609.

Narosa fulgens (Leech): Inoue, 1976, *Bull. Fac. Domestic Sci., Otsuma Woman's Univ.*, 12: 157.

Narosa kanshireana Matsumura, 1927, *J. Coll. Agr. Hokkaido Imp. Univ.*, 19: 87.

Specimens examined: Beijing, Sanbao, 1 ♂, 1976. VII. 23, Zhao Jianming. Zhejiang, Hangzhou, 1 ♂, 1978. VI. 21, Yan Hengyuan, 2 ♂♂, 1976. VI. 20, 1 ♂, 1972. VII. 19; Lin'an County, 1 ♂, 1977. VI. Anhui, Mt. Huangshan, 1 ♂, 1977. VII. 20, Huang Ji. Fujian, Nanping City, Shangyang, 1 ♂, 1963. VII. 7; Fuzhou City, 1 ♂, 1982. VI. 12, Jiang Fan; Nanjing, Tiankui, 1 ♀, 1973. VII. 23, Chen Yixin; Mt. Wuyi 740 m, 1 ♂, 1960. VI. 26, Zhang Yiran, 1 ♂, 1982. VI. 30, Jiang Fan; Guadun, 1 ♂, 1979. VIII. 11, Song Shimei. Jiangxi, Dayu County, 1 ♂, 1984. VIII. 14, Wang Ziqing; Wuyuan, 1 ♂, 1980. V. 17; Mt. Jiulian, 2 ♂♂, 1975. VII. 30, Song Shimei; Yifeng County, 1 ♂, 1957. VII. 10. Shandong, Yantai City, 3 ♂♂, 1981. VI – VII; Zhiwendong, 1 ♂, 1980. VII. 10. Henan, Neixiang 1 ♀, 1998. VII. 12; Huixian County, Baligou, 1 ♂ 2 ♀, 2000. VII. 12 – 15. Hubei, Shennongjia County 900 – 950 m, 2 ♂♂, 1980. VII. 4 – 21, Yu Peiyu; Xingshan County, Longmenhe 1 200 m, 1 ♂, 1993. VI. 18, Yao Jian. Guangxi, Qinzhou, 1 ♂, 1980. IV. 15, Cai Rongquan; Longsheng County, 9 ♂♂, 1980. VI. 10 – 11, Wang Linyao; Longsheng, Hongtan 900 m, 1 ♂, 1963. VI. 14, Wang Chunguang; Pingxiang 230 m, 2 ♂♂, 1976. VI. 11 – 12, Zhang Baolin, 1 ♀, 1980. IV. 24, Cai Rongquan; Longzhou County, Sanlian 350 m, 1 ♂, 2000. VI. 14, Li Wenzhu; Guilin, Yanshan 200 m, 1 ♂, 1963. V. 13, Wang Chunguang; Napo County, Defu 1 350 m, 1 ♂, 1998. VIII. 16, He Tongli; Jinxiu County, Huawangshanhuang 600 m, 3 ♀♀, 1999. V. 20, Zhang Xuezhong; Jinxiu, Luoxiang 200 m, 1999. V.

15, Han Hongxiang; Mt. Miaoershan 1 150 m, 1 ♂, 1985. VII. 7, Fang Chenglai. Hainan, Mt. Jianfeng 760 m, 12 ♂♂ 1 ♀, 1980. III. 18 – IV. 13, Cai Rongquan; Baoting 1 ♂, 1973. V. 24, Cai Rongquan. Chongqing, Mt. Jinyun 800 m, 1 ♂, 1994. VI. 13, Li Wenzhu; Fengdu County, Shiping 610 m, 2 ♂♂, 1994. VI. 2, Li Wenzhu; Wanzhou City, Wangerbao 1 200 m, 1 ♂, 1993. VII. 10, Yao Jian; Pengshui County, Taiyuan 750 m, 1 ♂, 1989. VII. 9, Yang Longlong. Sichuan, Mt. Emei 800 – 1 000 m, 25 ♂♂ 2 ♀♀, 1957. VI. 15 – 30, Zhu Fuxing, Huang Keren; Panzhihua City, Lanmuqiao 2 100 m, 1 ♂, 1980. VIII. 21, Han Yinheng. Yunnan, Menghai County 1 200 m, 2 ♂♂, 1958. VII. 18 – 20, Wang Shuyong, Pu Fuji; Damenglong 650 m, 1 ♀, 1958. V. 4, Zhang Yiran; Xiaomengyang 850 m, 1 ♂, 1957. IV. 28, Pu Fuji; Hekou County 100 m, 1 ♂, 1956. VI. 9, Huang Keren. Gansu, Wenxian County, Fangba 800 m, 1 ♂, 1998. VI. 26, Zhang Xuezhong; Kangxian County, Qinghe Forestry Farm 1 450 m, 1 ♂, 1998. VII. 15, Zhang Xuezhong.

Distribution: Beijing, Zhejiang, Anhui, Fujian, Jiangxi, Shandong, Henan, Hubei, Hunan, Guangxi, Hainan, Sichuan, Yunnan, Gansu, Taiwan; Korea, Japan.

4 *Narosa nigrisigna* Wileman, 1911 (Figs. 3, 10, 16)

Narosa nigrisigna Wileman, 1911, *Entomologist*, 44: 204.

Narosa penicillata Strand, 1916, *Arch. F. Naturg.*, A3: 141.

Heterogenea formosana Matsumura, 1927, *J. Coll. Agr. Hokkaido Imp. Univ.*, 19: 90.

Specimens examined: Beijing, 25 ♂♂ 17 ♀, 1957. VI. 17 – VII. 28, Yu Peiyu; Yuanmingyuan, 1 ♀, 1972. VI., Zhang Baolin; Botanical garden, 1 ♀, 1979. VIII. 30; Zhongguancun, 1 ♂ 2 ♀♀, 1956. VII. 2 – 14; Tongzhou, 1 ♀, 1972. VI. 20, Zhang Baolin. Hebei, Changli County, 1 ♂, 1972. VI. 17. Liaoning, Suizhong County, 1 ♀, 1958. VII. 4. Shandong, Mt. Taishan, 1 ♀, 1981. VII. 16; Yashan, 1 ♀, 1964. VI. 25. Jiangxi, Mt. Jiulian, 2 ♂♂, 1975. VII. 30, Song Shimei; Yiyang County, 1 ♂, 1975. VIII. 14, Song Shimei; Dayu County, 2 ♂♂, 1976. VIII. 3 – 15, Liu Youqiao; Mt. Lushan 1 100 m, 1 ♂, 1975. VII, Liu Youqiao. Hunan, Mt. Hengshan, 2 ♂♂, 1974. VI. 1, Zhang Baolin. Guangxi, Guilin, 1 ♂, 1976. VII. 17, Fang Chenglai; Longsheng 300 m, 1 ♀, 1963. V. 26, Wang Chunguang. Sichuan, Mt. Qingcheng, 2 ♂♂, 1990. VII. 31 – VIII. 9; Mt. Emei, 1 ♂, 1979. V. 6, Wang Ziqing; Chengdu, 1 ♀, 1980. VII. 24. Yunnan, Xishuangbanna Prefecture, Damenglong 650 m, 1 ♂, 1962. V. 22, Song Shimei. Shaanxi,

Taibai County, Huangbaiyuan 1 350 m, 1 ♂ 1 ♀, 1980. VII. 13, Zhang Baolin. Gansu, Zhouqu County, Shatan Forestry Farm, 2 400 m, 2 ♂ ♂, 1999. VII. 9 – 15, Wang Hongjian; Kangxian County, Qinghe Forestry Farm 1 400 m, 1 ♂, 1999. VI. 8.

Distribution: Beijing, Hebei, Liaoning, Shandong, Jiangxi, Hunan, Guangxi, Sichuan, Yunnan, Shaanxi, Gansu, Taiwan.

5 *Narosa edoensis* Kawada, 1930 (Figs. 4, 11, 17)

Narosa edoensis Kawada, 1930, *J. Imp. Agric. Exp. Sta. Nishigahara*, 1: 252.

Specimens examined: Shanghai, 1 ♂, 1933. VI. 21, A. Savio. Zhejiang, Jinhua City, 10 ♂ ♂ 18 ♀ ♀, 1983. III, Chen Zhongze, 6 ♂ ♂ 5 ♀ ♀, 1985. IV. 19 – 24, Chen Zhongze; Hangzhou, 3 ♂ ♂ 4 ♀ ♀, 1973. VII. 28 – VIII. 2, Zhang Baolin. Fujian, Laizhou, 2 ♂ ♂, 1982. V. 14 – 20, 1 ♀, 1982. VII. 13, Lin Yulan; Putian, 1 ♂, 1978. VI. 29. Jiangxi, Nanchang, 1 ♀, 1975. VII. 23; Liantang, 1 ♀, 1975. VIII. 28; Mt. Jiulian, 1 ♂, 1975. VII. 30, Song Shimei. Hubei, Shennongjia County 950 m, 1 ♂, 1980. VII. 3, Yu Peiyu. Guangdong, Guangzhou, 2 ♂ ♂ 1 ♀, 1981. VIII. 21 – IX. 10. Guangxi, Jinxiu County, Tiantangshan 900 m, 1 ♂, 1999. V. 17, Liu Dajun; Longsheng, 1 ♂, 1980. VI. 10, Wang Linyao. Sichuan, Huili, 1 ♂, 1984. VIII.

Distribution: Shanghai, Zhejiang, Fujian, Jiangxi, Hubei, Guangdong, Guangxi, Sichuan, Taiwan; Japan.

6 *Narosa ochracea* Hering, 1931 (Figs. 5, 12)

Narosa ochracea Hering, 1931, in: Seitz, *Macrolep. World*, 10: 675, fig. 86b.

Specimens examined: Shandong, Laoshan 800 m, 1 ♂, 1930. Guangxi, Longzhou, Longgang 330 m, 1 ♂, 2000. VI. 15, Zhu Chaodong; Longzhou, Daqingshan 360 m, 3 ♂ ♂, 1963. IV. 22, Wang Chunguang. Hainan, Wanning 60 m, 1 ♂, 1963. VII. 30, Zhang Baolin; Maorui, 1 ♂, 1984. VIII. 24, Lin Youdong; Jianfengling, 1 ♂, 1980. IV. 20, Fang Chenglai. Yunnan, Menghai County 1 200 m, 2 ♂ ♂, 1980. VI. 16, 3 ♂ ♂, 1982. IV. 21 – 26, Luo Hengwen; Damenglong 650 m, 4 ♂ ♂, 1962. V. 22, Song Shimei; Meng'a 1 050 m, 1 ♂, 1958. VIII. 16, Wang Shuyong; Jingdong County 1 170 m, 2 ♂ ♂, 1956. V. 21 – VI. 1, Zagulyaev; Jinping County, Hetouzai 1 700 m, 1 ♂, 1956. V. 12, Huang Keren; Jinping, Mengla 400 m, 1 ♂, 1956. V. 3, Huang Keren; Cangyuan 790 m, 1 ♂, 1980. V. 20, Shang Jingwen; Hekou County 80 – 100 m, 2 ♂ ♂, 1956. VI. 7 – 9, Huang Keren.

Food plant: Peach.

Distribution: Shandong, Guangdong, Guangxi, Hainan, Yunnan; Thailand, Malaysia.

7 *Narosa pseudochracea* Hering, 1933

Narosa pseudochracea Hering, 1933, in: Seitz, *Macrolep. World*, Suppl. 2: 203, fig. 15h.

Distribution: Sichuan (Chung-Kiang).

Notes: This species was described from Chung-kiang, West China based on 1 ♂ specimen (Holotype), which is deposited in the Museum at Tring. We do not have any specimens.

8 *Narosa propolia* Hampson, 1900 (Figs. 6, 18)

New record to China

Narosa propolia Hampson, 1900, *J. Bomb. Nat. Hist. Soc.*, 13: 232.

Narosa concinna (nec Swinhoe): Cai, 1982. *Insects of Xizang*, 2: 32.

Specimens examined: Xizang, Medog County, Maniwung 1 000 m, 1 ♀, 1979. IX. 11, Huang Fusheng.

Distribution: Xizang; India (Sikkim).

9 *Narosa pseudopropolia* sp. nov. (Figs. 7, 13)

Wing expanse about 23 mm. Head and thorax white, scattered with yellowish brown dots in the latter. Abdomen pale yellow, with yellowish brown dots in median dorsum. Forewing light yellowish white, costal margin relatively white; some broken yellowish brown fasciae composed of stripes and dots; grayish white outer line indistinct, serrate; a row of subterminal crescent black dots lined with white inside. Hindwing pale yellowish brown, paler towards costal margin.

Male genitalia (Fig. 13): Tegumen narrow and long, bearing long hair along lateral margin; uncus subapically with a spine; gnathos long, apex relatively blunt; valva narrow and long, apex broadly rounded; sacculus wide, inner margin with a row of spines increasing from base to end, apex with a big spine curved inward; juxta apically with a pair of long processes; aedeagus thin relatively, shorter than length of valva.

Holotype ♂, Hainan, Jianfengling 760 m, 1980. III. 22, Cai Rongquan. Paratypes: 3 ♂ ♂, same data as holotype.

Distribution: Hainan.

Diagnosis: This new species is related to *N. propolia* Hampson and *N. propolioides* Holloway, but differs from them by the sacculus bearing a row of spines in inner margin.

Etymology: The name is derived from the Greek “pseudo-” (= false) and “propolia”, corresponding to the similarity with *N. propolia* Hampson.

10 *Narosa nitobei* Shiraki, 1913

Narosa nitobei Shiraki, 1913, *Taiw. Noji-Shik. Tokub.-Hok.*, 8: 391.

Specimens examined: None.

Distribution: Taiwan.

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中国眉刺蛾属分类研究 (鳞翅目:刺蛾科)

武春生*, 方承莱

(中国科学院动物进化与系统学重点实验室, 中国科学院动物研究所, 北京 100101)

摘要: 系统整理了中国眉刺蛾属的全部种类, 共 9 种及 1 亚种, 包括 1 新种——黄眉刺蛾 *Narosa pseudopropolia* Wu et Fang 及 1 新纪录种——齐眉刺蛾 *N. propolia* Hampson。编制了本属中国已知种的检索表, 提供了成虫和外生殖器特征照片。新种模式标本保存在中国科学院动物研究所。

关键词: 鳞翅目; 刺蛾科; 眉刺蛾属; 新记录; 新种; 中国

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